

The Simuliidae of Pennsylvania (Dipt.)*

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During 1948, 160 blackfly adults were separated from a large number of insects taken in light traps operated in twenty widely-separated localities of Pennsylvania. These catches supplied sufficient information for a preliminary report on the abundance and distribution of the Pennsylvania species. Eleven species were taken including several of considerable economic importance. A few records have been added from specimens in the Harrisburg collection. All were kindly determined by Dr. Alan Stone of the U. S. National Museum, Washington, D. C.

SUMMARY OF THE SIMULIIDAE TAKEN IN PENNSYLVANIA

Species	Number males	Number females	Number of localities	Dates of collection
<i>Simulium vittatum</i> Zett.	15	90	5	May 28 to Sept. 9
<i>Simulium fibrinflatum</i> Twinn	0	9	2	June 17 and Sept. 7
<i>Simulium pictipes</i> Hag.	7	0	1	May 2
<i>Simulium venustum</i> Say	1	5	4	May 21 to July 3
<i>Simulium aureum</i> Fries	1	0	1	June 14
<i>Simulium perissum</i> D & S.	1	0	1	June 2
<i>Simulium hydrationis</i> D & S.	1	0	1	June 9
<i>Simulium jenningsi</i> Mall.	0	1	1	June 7
<i>Prosimulium hirtipes</i> Fries	1	25	9	Apr. 4 to June 2
<i>Prosimulium magnum</i> D & S.	0	1	1	May 6
<i>Eusimulium</i> species	0	2	2	May 28 and June 18
Total 11 species	27	133		

This figure represents a fair proportion of the species likely to be found in Pennsylvania. Approximately 50 species of Simuliidae are known from North America. Thirty-three of these are limited in distribution to the Western United States, Alaska and Canada. Another twelve species are restricted to

* Authorized for publication on February 28, 1949 as paper No. 1516 in the Journal Series of the Pennsylvania Agricultural Experiment Station.

the Southern United States, Central America and the West Indies. Only seven distinct species are given in "A List of the Insects of New York." The Pennsylvania records are slightly more extensive. The following species, common in Eastern United States, should also occur in Pennsylvania: *Simulium metallicum* Bellard, *Eusimulium mutatum* (Mall.), *Eusimulium johannscui* (Hart) and *Eusimulium aureum bracteatum* (Coq.). Some of these were taken in light traps but the material was difficult to identify because no males were captured.

Four species deserve special mention. *Simulium vittatum* Zett. appears to be the most common species in Pennsylvania. This species has a wide range of distribution occurring generally throughout the United States including Alaska and is also known from Canada, Greenland and Mexico. It frequently attacks man and his stock and is generally troublesome. The long period of flight throughout the summer contributes to its special annoyance.

Prosimulium hirtipes Fries stands next in importance; however, it has a short period of flight during early spring.

Simulium venustum Say is another annoying species but appears not to be as common in Pennsylvania as the above species.

One specimen of *Simulium hydatationis* D. & S. was taken at Ohiopyle on June 9. Ohiopyle is located in Southwestern Pennsylvania on the Youghiogeny River in an Austral section of the State. Apparently this species has previously been taken only in Virginia.

It would seem from the accompanying table that the females are attracted to light more frequently than the males. In the case of *Simulium pictipes* Hag, the reverse seems to be true although the number of specimens obtained is too small to draw definite conclusions. In collecting blackflies by the biting method, females would undoubtedly predominate also.

The Simuliidae is an important group containing many species that annoy man, attack his animals or transmit certain animal diseases. The blackfly menace has been a bane to fishermen and hunters for a long time and some relief would be

welcome. The application of D.D.T. to control mosquitoes has shown reduction in the blackfly populations. These facts indicate the need for further surveys and more detailed study of the habits of these flies.

REFERENCES

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- LEONARD, M. D. (1926). A List of the Insects of New York. Cornell University Memoir 101: 749.
- MALLOCH, J. R. (1914). American Black Flies or Buffalo Gnats. U. S. Dept. Agric. Bur. Ent. Tech. Bull. 26: 1-70.

Correction

The biographical sketch of Father Hermann Schmitz, S.J., written by Father Borgmeier and appearing in the *Revista de Entomologia* 19: 587-88, was incorrectly listed as an obituary in the Current Literature section of *ENT. NEWS* for March (page 76). We are sorry for this error and have since learned that Father Schmitz, one of the few remaining specialists on World Phoridae now resides at Bad Godesberg a. Rh., Germany, and that he expects to return to Holland in 1951 in order to continue as curator of the famous Wasmann collection in Maastrich.

Current Entomological Literature

COMPILED BY RAYMOND Q. BLISS AND
R. G. SCHMIEDER.

Under the above head it is intended to note papers received at the Academy of Natural Sciences of Philadelphia and the University of Pennsylvania, pertaining to the Entomology of the Americas (North and South), including Arachnida and Myriopoda. Articles irrelevant to American entomology will not be noted; but contributions to anatomy, physiology and embryology of insects, however, whether relating to American or exotic species will be recorded.

This list gives references of the year 1949 unless otherwise noted. Continued papers, with few exceptions, are recorded only at their first installment.

For other records of general literature and for economic literature, see the Bibliography of Agriculture, Washington, and the Review of Applied Entomology, Series A, London. For records of papers on medical entomology see Review of Applied Entomology, Series B.

NOTE: The figures within brackets [] refer to the journal in which the paper appeared, as numbered in the List of periodicals and serials published in our January and June issues. The number of the volume, and in some cases, the part, heft, &c. is followed by a colon (:). References to papers containing new forms or names not so stated in titles are followed by (*); if containing keys are followed by (k); papers pertaining exclusively to Neotropical species, and not so indicated in the title, have the symbol (S).

Papers published in *ENTOMOLOGICAL NEWS* are not listed.